



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Northern Region
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



June 28, 2023

Jill Demers, Executive Director
Humboldt County Resource Conservation District
5630 South Broadway
Eureka, CA 95503
jillhcrd@gmail.com

**SUBJECT: RUSS CREEK AND CENTERVILLE SLOUGH RESTORATION PROJECT
DRAFT EIR (SCH [2022040559](#))**

Dear Jill Demers:

On May 26, 2023, the California Department of Fish and Wildlife (CDFW) received the Humboldt County Resource Conservation District's (Lead Agency) Draft Environmental Impact Report (DEIR) for the Russ Creek and Centerville Slough Restoration Project (Project). CDFW understands the Lead Agency will accept comments on the Project through July 10, 2023.

As the Trustee Agency for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary to sustain their populations (Fish and Game Code, §§ 1801 and 1802). As a Responsible Agency, CDFW administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code that conserve the State's fish and wildlife public trust resources. CDFW offers the following comments and recommendations in our role as Trustee and Responsible Agency pursuant to the California Environmental Quality Act (CEQA; California Public Resource Code §21000 *et seq.*). These comments are intended to minimize Projects impacts on public trust resources.

Project Description

The Project Area is approximately 1,480 acres in the Eel River Estuary west of the City of Ferndale, in Humboldt County, California. It encompasses the Eel River Wildlife Preserve, owned by The Wildlands Conservancy, and several privately owned parcels. The Project is intended to restore tidal wetlands and protect adjacent agricultural lands from storm damage and sea level rise (SLR). Restoration work will reestablish tidal processes by removing or lowering dikes and excavating four miles of Centerville Slough to reconnect the estuary with tidal wetlands and tributary streams. The Project will also reconnect tidal channel networks and enhance approximately 500 acres of former wetlands previously diked and drained for agriculture. Revegetation and ongoing invasive species management will maintain newly restored areas. To protect adjacent agricultural lands from tidal inundation and overwash, the Project will repair an existing tide gate and construct a combination of set-back berms and back dunes incorporating fish-friendly gated culverts. A stretch of Russ Creek will be realigned, deepened, and planted with riparian vegetation. Finally, the Project will incorporate improvements to facilitate agricultural operations, Project maintenance, and public access.

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CDFW Comments

Long-Term Project Success

CDFW expects the Project to result in immediate ecological benefits by restoring tidal and geomorphic function to a large area of the Eel River coastal floodplain, thereby increasing and enhancing habitat for native plants, wildlife, and fish dependent on estuarine and tidal marsh environments. To ensure long-term Project viability and associated benefits to biological resources, CDFW encourages the Lead Agency to consider the foreseeable impacts of sea level rise, especially with respect to the continued erosion and movement of the dunes (**Recommendation 1**). The planning horizon should extend at least through 2050.

Extensive dune erosion has occurred in the western portion of the Project Area, where the marine littoral zone has migrated as much as 400 meters in the last ten years. Winter storms have steadily eroded the dune barrier, and repeated overwash events have altered roughly three kilometers of previously vegetated shoreline. In areas where the foredune barrier was maintained, the rate of shoreline retreat has still been as much as 1.5 meters per year between 1948 and 2016 (Friends of the Dunes and GHD 2018). Underlying sediment deposition patterns further exacerbate the effects of SLR, as currents primarily transport Eel River sediment in a northern direction, away from the Project Area.

CDFW anticipates the shoreline could retreat at similar or increased rates, threatening the long-term viability of the Project. If the historical average rate of dune retreat were maintained and the area were not subject to additional overwash events, the shoreline would retreat approximately 40 meters inland by 2050. However, overwash and dune erosion are likely to increase with SLR and more frequent storm events associated with climate change. As in 2020, winter storms coinciding with king tides are likely to result in sudden drastic changes to the shoreline and the location of sand deposition. Additional environmental factors may also increase vulnerability to SLR, such as compaction from agriculture, high rates of subsidence, and a loss of dune form and function.

While CDFW appreciates the Project's potential for immediate ecological lift, it has concerns about its long-term success due to the placement or design of certain components. As proposed, back dune berms are unlikely to successfully halt dune erosion or prevent tidal inundation and overwash in the long term. Severe erosion of the foredune is expected to continue and may accelerate with future SLR projections of two to three feet by 2050 (Humboldt County 2018). Anticipated shifts in the shoreline also pose a threat to the extension of Centerville Slough, which appears to pass through the current zone of overwash and sand deposition. Dredging sediment within the current or future littoral zone may accelerate dune erosion. Dredging may also create a sediment sink and prevent the natural inland movement of the dunes. Finally, placing tide gates in or adjacent to the zone of littoral sediment deposition may cause blockage and create a need for continuous maintenance. CDFW recommends structures requiring routine maintenance, such as tide gates and levees, be placed inland of the expected shifting marine littoral zone (**Recommendation 2**). Successful restoration and re-establishment of a tidal channel and tidal marsh habitat in the Project Area is dependent on maintaining a resilient dune ecosystem that provides a protective barrier for the Project Area.

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Restoration of Tributary Habitat

The Project is expected to increase the quality and extent of habitat for salmonids and other aquatic species by restoring tidal connectivity and creating or enhancing estuarine habitat. However, it does not address impaired tributary habitat upstream of the proposed tide gates, where historic stream channelization and loss of riparian forest limit habitat value. Improvements to Russ Creek will reconnect the stream with Centerville Slough and re-establish the riparian corridor, but work will be limited to a short reach and appears to focus primarily on floodwater management. To maximize the ecological benefits of proposed estuarine restoration, CDFW recommends the Lead Agency consider enhancements to riparian and aquatic habitat upstream of the tide gates (**Recommendation 3**). Restoration could address factors limiting the recovery of local salmonid populations, such as lack of floodplain and channel structure and degradation of riparian forest (NMFS 2014). By incorporating design elements such as sinuosity, off-channel habitat, inset floodplains, and large wood structures, the Project could have even greater benefits for salmonids and other native fish and wildlife dependent on freshwater aquatic and riparian ecosystems.

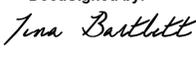
Summary of Recommendations

1. To ensure long-term Project viability and associated benefits to biological resources, the Lead Agency should consider the foreseeable impacts of SLR, especially with respect to the continued erosion and movement of the dunes. The planning horizon should extend at least through 2050.
2. Structures requiring routine maintenance, such as tide gates, dredged slough channels, and levees, should be placed inland of the expected shifting marine littoral zone.
3. To maximize the ecological benefits of proposed estuarine restoration, the Lead Agency should include design elements such as sinuosity, off-channel habitat, inset floodplains, and large wood structures to enhance riparian and aquatic habitat upstream of the tide gates in Russ Creek.

We appreciate the opportunity to comment on this proposed Project.

If you have any questions, please contact Environmental Scientist Kathryn Rian by email at Kathryn.Rian@wildlife.ca.gov.

Sincerely,

DocuSigned by:

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Tina Bartlett, Regional Manager
California Department of Fish and Wildlife

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California Department of Fish and Wildlife
Rebecca Garwood, Michael van Hattem, Kathryn Rian

References

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Humboldt County. 2018. Humboldt Bay Area Plan Sea Level Rise Policy Background Study. Available from
https://humboldt.gov/DocumentCenter/View/106574/Rerelease-LCP_2019_Stakeholder_Catalogue_June_2022?bidId=.

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